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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,676	12/13/2000	Ardavan Bahraini	578-3002	5617

7590

01/20/2004

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EXAMINER

MANNING, JOHN

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 01/20/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/735,676

Applicant(s)

BAHRAINI, ARDAVAN

Examiner

John Manning

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leary (US Pat No 6,425,133) in view of Bacon et al. (US Pat No 5,440,632).

In regard to claim 1, the Leary reference discloses a method of configuring a cable television converter or a set top box, using multiple channels. The reference discloses a method where a control signal or "message", instructing a set top box to tune to a different channel for downloading code, is transmitted to the set top box from the head-end. The signals received on the in-band service channel initialize the set top box. The "A first signal channel, e.g. the traditional out-of-band control channel, is used to transmit a first set of configuration data that includes a first command. When executed by the cable television converter terminal, the first command causes the cable television converter terminal to tune to a second channel for receiving additional configuration data. Preferably, the second signal channel has a bandwidth higher than the bandwidth of the first signal channel." (Col 2, Lines 40-48). The reference fails to explicitly disclose that the control signal designates whether to tune to an in-band or an out-of-band channel. The Bacon et al. reference teaches a set top box that receives code on either an in-band or out-of-band channel so as to provide multiple mediums for

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transmission of the code (Col 2, Lines 52-58; Col 5, Lines 44-58; Col 6, Lines 15-31).

Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Leary reference with identification of the set top box by sending identification data from the set top box to the head-end so as to maintain accurate account and billing information as well as monitor the authorized channel access.

In regard to claim 2, in the Leary reference, a "trace and routing" message is sent on an out-of-band channel that contains the service channel frequency parameters and a "flag" which indicated the presence of the in-band signal. The "command sequence transmitted on the out-of-band control channel is abbreviated and includes an instruction to tune the cable television converter terminal 202 to an in-band data channel, which lies within the frequency range used to transmit programming signals. The remainder of the configuration information, which can include commands and/or other types of information is then provided on the in-band data channel" (Col 4, Lines 27-35).

In regard to claim 3, the Bacon et al. reference discloses the use of a boot program to provide a loading routine for downloading new programming such as platform code. "The control microprocessor 128 contains the boot program in its internal ROM which, upon start up or reset, will initialize the subscriber terminal 40 and initiate the control program of the control microprocessor 128 from the correct starting address. The boot program also provides a loading routine for the downloading of new control code, either into the internal non-volatile memory of the subscriber terminal 40, such as Flash EPROM memory 134, the external memory on the expansion card 138,

or both. The boot program comprises an initialization and loading program and several kernel routines" (Col 13, Lines 54-65).

In regard to claim 10, the Bacon et al. reference comprises RAM for storing downloaded code. "The in-band data, except for descrambling data, is stored in DRAM 137 for buffering" (Col 7, Lines 16-17). The reference does not explicitly disclose a CRC check for verification purposes. However, the examiner gives OFFICIAL NOTICE that it is notoriously well known in the art to use CRC check for verification purposes. Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Bacon et al. with a CRC check for verification purposes.

3. Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leary in view of Bacon et al. (US Pat No 5,440,632) in further view of Hendricks et al (US Pat No 5,990,927).

In regard to claim 4, the Leary reference discloses a method of configuring a cable television converter or a set top box, using multiple channels. The reference fails to explicitly disclose the step of authorizing a digital access controller before or after the step of transmitting the out-of-band control signal. Hendricks et al. reference teaches the initialization or configuration, by the digital access controller or the network controller 214, of the set top box, which can take place either before or after the out-of-band transmission so as to give the end-user access to the provided services.

"As a network controller 214, the cable headend 208 performs the system control functions for the system. The primary function of the network controller 214 is to manage the configuration of the set top terminals 220 and process signals received from the set top terminals 220. In the preferred embodiment, the network controller 214 monitors, among other things, automatic poll-back responses from the set top terminals 220 remotely located at each subscribers'

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home. The polling and automatic report-back cycle occurs frequently enough to allow the network controller 224 to maintain accurate account and billing information as well as monitor authorized channel access. In the simplest embodiment, information to be sent to the network controller 224 will be stored in RAM within each subscriber's set top terminal 220 and will be retrieved only upon polling by the network controller 214. Retrieval may, for example, occur on a daily, weekly or monthly basis. The network controller 214 allows the system to maintain complete information on all programs watched using a particular set top terminal 220. The network controller 214 is also able to respond to the immediate needs of a set top terminal 220 by modifying a program control information signal received from the operations center 202. Therefore, the network controller 214 enables the delivery system to adapt to the specific requirements of individual set top terminals 220 when the requirements cannot be provided to the operations center 202 in advance. In other words, the network controller 224 is able to perform "on the fly programing" changes" (Col 9, Lines 30-65).

Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Leary reference with the initialization or configuration, by the digital access controller or the network controller 214, of the set top box, which can take place either before or after the out-of-band transmission so as to give the end-user access to the provided services.

In regard to claim 7, the Leary reference discloses a method of configuring a cable television converter or a set top box, using multiple channels. The reference discloses a method where a control signal or "message", instructing a set top box to tune to a different channel for downloading code, is transmitted to the set top box from the head-end. The signals received on the in-band service channel initialize the set top box. The "A first signal channel, e.g. the traditional out-of-band control channel, is used to transmit a first set of configuration data that includes a first command. When executed by the cable television converter terminal, the first command causes the cable television converter terminal to tune to a second channel for receiving additional

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configuration data. Preferably, the second signal channel has a bandwidth higher than the bandwidth of the first signal channel.” (Col 2, Lines 40-48). The reference fails to explicitly disclose that the control signal designates whether to tune to an in-band or an out-of-band channel. The Bacon et al. reference teaches a set top box that receives code on either an in-band or out-of-band channel so as to provide multiple mediums for transmission of the code (Col 2, Lines 52-58; Col 5, Lines 44-58; Col 6, Lines 15-31). Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Leary reference with identification of the set top box by sending identification data from the set top box to the head-end so as to maintain accurate account and billing information as well as monitor the authorized channel access. Additionally, in the Leary reference, a “trace and routing” message is sent on an out-of-band channel that contains the service channel frequency parameters and a “flag” which indicated the presence of the in-band signal. The “command sequence transmitted on the out-of-band control channel is abbreviated and includes an instruction to tune the cable television converter terminal 202 to an in-band data channel, which lies within the frequency range used to transmit programming signals. The remainder of the configuration information, which can include commands and/or other types of information is then provided on the in-band data channel” (Col 4, Lines 27-35). Further, the Bacon et al. reference discloses the use of a boot program to provide a loading routine for downloading new programming such as platform code. “The control microprocessor 128 contains the boot program in its internal ROM which, upon start up or reset, will initialize the subscriber terminal 40 and initiate the control

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program of the control microprocessor 128 from the correct starting address. The boot program also provides a loading routine for the downloading of new control code, either into the internal non-volatile memory of the subscriber terminal 40, such as Flash EPROM memory 134, the external memory on the expansion card 138, or both. The boot program comprises an initialization and loading program and several kernel routines" (Col 13, Lines 54-65). Further, the Leary reference discloses a method of configuring a cable television converter or a set top box, using multiple channels. The reference fails to explicitly disclose the step of authorizing a digital access controller before or after the step of transmitting the out-of-band control signal. Hendricks et al. reference teaches the initialization or configuration, by the digital access controller or the network controller 214, of the set top box, which can take place either before or after the out-of-band transmission so as to give the end-user access to the provided services.

"As a network controller 214, the cable headend 208 performs the system control functions for the system. The primary function of the network controller 214 is to manage the configuration of the set top terminals 220 and process signals received from the set top terminals 220. In the preferred embodiment, the network controller 214 monitors, among other things, automatic poll-back responses from the set top terminals 220 remotely located at each subscribers' home. The polling and automatic report-back cycle occurs frequently enough to allow the network controller 224 to maintain accurate account and billing information as well as monitor authorized channel access. In the simplest embodiment, information to be sent to the network controller 224 will be stored in RAM within each subscriber's set top terminal 220 and will be retrieved only upon polling by the network controller 214. Retrieval may, for example, occur on a daily, weekly or monthly basis. The network controller 214 allows the system to maintain complete information on all programs watched using a particular set top terminal 220. The network controller 214 is also able to respond to the immediate needs of a set top terminal 220 by modifying a program control information signal received from the operations center 202. Therefore, the network controller 214 enables the delivery system to adapt to the specific requirements of individual set top terminals 220 when the requirements cannot be provided to the operations center 202 in advance. In other words, the network

controller 224 is able to perform "on the fly programing" changes" (Col 9, Lines 30-65).

Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Leary reference with the initialization or configuration, by the digital access controller or the network controller 214, of the set top box, which can take place either before or after the out-of-band transmission so as to give the end-user access to the provided services.

4. Claims 5-6, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leary in view of Bacon et al. in further view of Hendricks et al. and in firther view of Wagner et al. (US Pat No 5,761,602).

In regard to claim 5, the Leary reference discloses a method of configuring a cable television converter or a set top box, using multiple channels. The reference discloses a method where a control signal or "message", instructing a set top box to tune to a different channel for downloading code, is transmitted to the set top box from the head-end. The signals received on the in-band service channel initialize the set top box. The reference fails to explicitly disclose the adaptive channel selection base on predetermined parameters. The Wagner et al. reference teaches the adaptive channel selection base on predetermined parameters, where the predetermined parameter is bandwidth so as to provide a higher information transfer rate. "Multiple channels on broadcast link 6 are available for the transmission of data packets to clients 2. The channels on which clients 2 receive data packets are switched in order to maximize the available VBI lines in all of the channels. In other words, client 2 does not always receive data on the same VBI lines in the same channel. Both the VBI lines and the

channel are switched. The switching may take place from data message (i.e., a multiplicity of data packets which together form a single message) to data message or during the transmission of a single data message. Channel and VBI line switching is controlled by commands from distributor 5" (Col 7, Line 35-45). "The selection of channel and line for data is determined by a technique queue management and based upon the availability of bandwidth, the priority of the data, average client waiting time, size of the data, and the type of transaction" (Col 7, Lines 57-60). Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the Leary reference with the adaptive channel selection base on predetermined parameters, where the predetermined parameter is bandwidth so as to provide a higher information transfer rate.

In regard to claim 6, the Wagner et al. reference discloses the monitoring of channel bandwidth so as to "decide" between channels. "Multiple channels on broadcast link 6 are available for the transmission of data packets to clients 2. The channels on which clients 2 receive data packets are switched in order to maximize the available VBI lines in all of the channels. In other words, client 2 does not always receive data on the same VBI lines in the same channel. Both the VBI lines and the channel are switched. The switching may take place from data message (i.e., a multiplicity of data packets which together form a single message) to data message or during the transmission of a single data message. Channel and VBI line switching is controlled by commands from distributor 5" (Col 7, Line 35-45). "The selection of channel and line for data is determined by a technique queue management and based

upon the availability of bandwidth, the priority of the data, average client waiting time, size of the data, and the type of transaction" (Col 7, Lines 57-60).

In regard to claim 8, the Wagner et al. reference teaches the adaptive channel selection base on predetermined parameters, where the predetermined parameter is bandwidth so as to provide a higher information transfer rate. "Multiple channels on broadcast link 6 are available for the transmission of data packets to clients 2. The channels on which clients 2 receive data packets are switched in order to maximize the available VBI lines in all of the channels. In other words, client 2 does not always receive data on the same VBI lines in the same channel. Both the VBI lines and the channel are switched. The switching may take place from data message (i.e., a multiplicity of data packets which together form a single message) to data message or during the transmission of a single data message. Channel and VBI line switching is controlled by commands from distributor 5" (Col 7, Line 35-45). "The selection of channel and line for data is determined by a technique queue management and based upon the availability of bandwidth, the priority of the data, average client waiting time, size of the data, and the type of transaction" (Col 7, Lines 57-60).

In regard to claim 9, the Wagner et al. reference discloses the monitoring of channel bandwidth so as to "decide" between channels. "Multiple channels on broadcast link 6 are available for the transmission of data packets to clients 2. The channels on which clients 2 receive data packets are switched in order to maximize the available VBI lines in all of the channels. In other words, client 2 does not always receive data on the same VBI lines in the same channel. Both the VBI lines and the

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channel are switched. The switching may take place from data message (i.e., a multiplicity of data packets which together form a single message) to data message or during the transmission of a single data message. Channel and VBI line switching is controlled by commands from distributor 5" (Col 7, Line 35-45). "The selection of channel and line for data is determined by a technique queue management and based upon the availability of bandwidth, the priority of the data, average client waiting time, size of the data, and the type of transaction" (Col 7, Lines 57-60).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Manning whose telephone number is 703-305-0345. The examiner can normally be reached on M-F: 7:30 - 5:00 (off every other Wednesday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W Miller can be reached on 703-305-4795. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-9695 for regular communications and 703-746-9695 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is (703) 308-HELP.


JOHN MILLER
SUPERVISORY PATENT EXAMINER
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JM
January 12, 2004